Supporting Information

In vitro cell cytotoxicity profile and morphological response to polyoxometalate-stabilised gold nanoparticles

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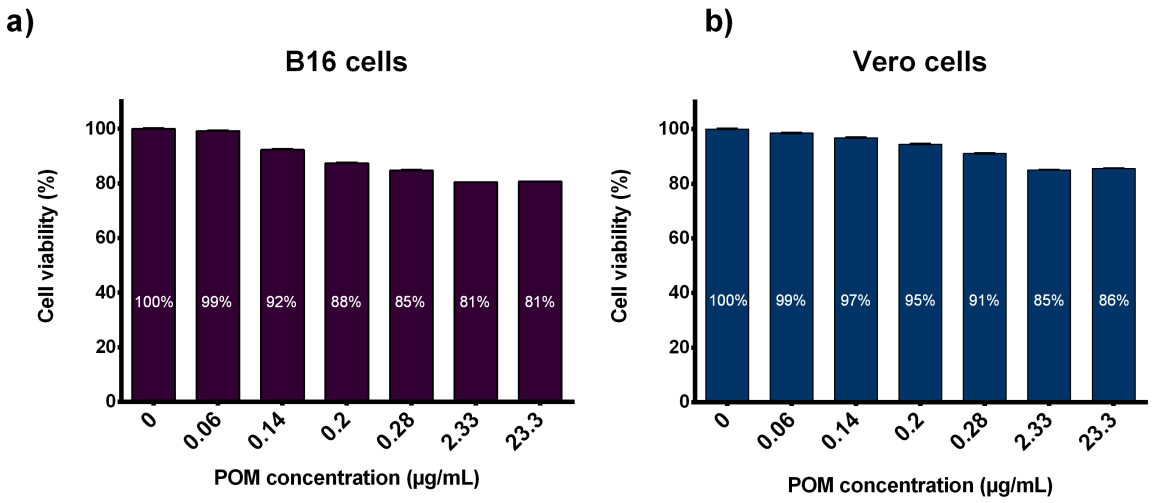
MTT cell viability assays for the molecular Kabanos-type POM, $(NH_3)_{15}Na\{(Mo_2^{V}O_4)_3(\mu_2\text{-}O)_3(\mu_2\text{-}SO_3)_3(\mu_6\text{-}SO_3)\}_2]$

MTTs with Au@POMs (graph 1) were performed at the following concentrations: 0.1, 0.07, 0.05 and 0.02 mg/mL. ICP analysis of the AuNPs@POM allowed us to calculate the amount of Mo (and therefore POM) on the surface of the AuNP. For the molecular Kabanos-type POM $(NH_3)_{15}Na\{(Mo_2^{V}O_4)_3(\mu_2\text{-}O)_3(\mu_2\text{-}SO_3)_3(\mu_6\text{-}SO_3)\}_2]$ this corresponds to concentrations of 0.2, 0.28, 0.14, 0.06 mg/mL. We also included significantly higher concentrations of the POM: 2.33 and 23.33 mg/mL.

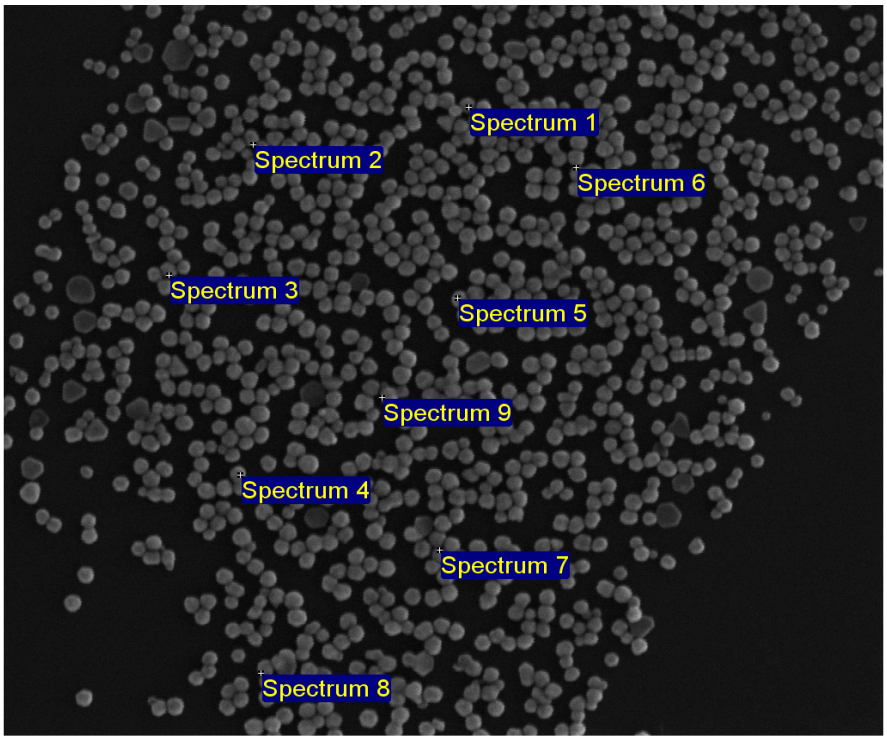
Briefly, the POM was dissolved in MilliQ water with agitation and heating to 45 ^{o}C. This solution was filtered with cellulose filter and subsequent dilutions in cell culture medium were prepared. B16 and Vero cells were incubated with various concentrations of AuNPs@POM for 24 h. Afterwards the cells were thoroughly washed with PBS and incubated with MTT as described in experimental section. Results for different concentrations are shown in Graph S1. Sextets were performed for the control experiments and for each concentration of POM.



Graph S1. a) and b) concentration-dependent MTT assay cell viability results of POM incubated for 24h at 37 °C with B16 and Vero cells, respectively. The measured absorbance from control (blank cells without POM) was treated as 100% of viable cells. Sextets were performed for the control experiment and for each concentration of POM.

EDX point-and-shoot elemental analysis

Point and shoot EDX was used to give an idea of elemental composition of the particles. Full characterisation of the AuNPs@POM can be found in a corresponding paper.



Spectrum	Mo	Au
Spectrum 1	47.01	55.83
Spectrum 2	36.16	17.50
Spectrum 3	35.23	17.97
Spectrum 4	29.04	2.99
Spectrum 5	33.77	19.14
Spectrum 6	25.82	3.55
Spectrum 7	45.23	33.54
Spectrum 8	34.61	8.14
Spectrum 9	32.35	13.58
Mean	**35.47**	**19.14**